

CLAIMS

1. A method of producing a carbon nanotube dispersed composite material comprising a process of kneading and dispersing a ceramics powder or metal (including its alloy) powder or a mixture of both said powders and long-chain carbon nanotubes in an amount of 10 wt% or less, and a process of sintering the knead-dispersed material by discharge plasma.
2. A method of producing a carbon nanotube dispersed composite material comprising a process of kneading and dispersing a ceramics powder or metal (including its alloy) powder or a mixture of both said powders and long-chain carbon nanotubes in an amount of 10 wt% or less of which carbon nanotubes only have been treated previously by discharge plasma, and a process of sintering the knead-dispersed material by discharge plasma.
3. A method of producing a carbon nanotube dispersed composite material comprising a process of kneading and dispersing a ceramics powder or metal (including its alloy) powder or a mixture of both said powders and long-chain carbon nanotubes in an amount of 10 wt% or less, a process of wet-dispersing said powder and carbon nanotubes using a dispersing agent and a process of sintering the dried knead-dispersed

material by discharge plasma.

4. A method of producing a carbon nanotube dispersed composite material comprising a process of kneading and dispersing a ceramics powder or metal (including its alloy) powder or a mixture of both said powders and long-chain carbon nanotubes in an amount of 10 wt% or less of which carbon nanotubes only have been treated previously by discharge plasma, a process of wet-dispersing said powder and carbon nanotubes using a dispersing agent and a process of sintering the dried knead-dispersed material by discharge plasma.

5. A method of producing a carbon nanotube dispersed composite material comprising a process of kneading and dispersing a ceramics powder or metal (including its alloy) powder or a mixture of both said powders and long-chain carbon nanotubes in an amount of 10 wt% or less, a process of treating the knead-dispersed material by discharge plasma and a process of sintering the resultant dispersed material by discharge plasma.

6. A method of producing a carbon nanotube dispersed composite material comprising a process of kneading and dispersing a ceramics powder or metal (including its alloy) powder or a mixture of both said powders and long-chain carbon

nanotubes in an amount of 10 wt% or less of which carbon nanotubes only have been treated previously by discharge plasma, a process of treating the knead-dispersed material by discharge plasma and a process of sintering the resultant dispersed material by discharge plasma.

7. A method of producing a carbon nanotube dispersed composite material comprising a process of kneading and dispersing a ceramics powder or metal (including its alloy) powder or a mixture of both said powders and long-chain carbon nanotubes in an amount of 10 wt% or less, a process of wet-dispersing said powder and carbon nanotubes using a dispersing agent, a process of treating the dried knead-dispersed material by discharge plasma and a process of sintering the resultant dispersed material by discharge plasma.

8. A method of producing a carbon nanotube dispersed composite material comprising a process of kneading and dispersing a ceramics powder or metal (including its alloy) powder or a mixture of both said powders and long-chain carbon nanotubes in an amount of 10 wt% or less of which carbon nanotubes only have been treated previously by discharge plasma, a process of wet-dispersing said powder and carbon nanotubes using a dispersing agent, a process of treating the dried knead-dispersed material by discharge plasma and a process of

sintering the resultant dispersed material by discharge plasma.

9. The method of producing a carbon nanotube dispersed composite material according to any one of Claims 1 to 8, wherein the process of sintering the knead-dispersed material by discharge plasma includes two steps of carrying out plasma discharge at low temperature under low pressure and then carrying out sintering by discharge plasma at low temperature under high pressure.

10. The method of producing a carbon nanotube dispersed composite material according to any one of Claims 1 to 8, wherein the ceramics powder has an average particle size of 10  $\mu\text{m}$  or less and the metal powder has an average particle size of 200  $\mu\text{m}$  or less.

11. The method of producing a carbon nanotube dispersed composite material according to any one of Claims 1 to 8, wherein the ceramics powder is composed of one or more of alumina, zirconia, aluminum nitride, silicon carbide and silicon nitride.

12. The method of producing a carbon nanotube dispersed composite material according to any one of Claims 1 to 8, wherein the metal powder is composed of one or more of pure aluminum,

aluminum alloy, titanium, titanium alloy, copper, copper alloy  
and stainless steel.